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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/496,111	02/01/2000	Brian L. Allen	BUR990217US1	5743

29154 7590 11/21/2002

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EXAMINER

WILLIAMS, DEMETRIA A

ART UNIT	PAPER NUMBER
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2631

DATE MAILED: 11/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/496,111

Applicant(s)

ALLEN, BRIAN L.

Examiner

Demetria A. Williams

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 August 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 2 recites the limitation "said successive partial summation unit" in the last line of the claim. There is insufficient antecedent basis for this limitation in the claim. There is no mention made in claim 1, from which this claim depends, of a partial summation unit and it is unclear if this is the same unit referred to as a "summation unit" in claim 1.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, 7-11, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Cavallotti et al ("Cavallotti").

Regarding claims 1 and 8, Cavallotti discloses a non-recursive filter comprising at least one input for receiving samples, a plurality of summation units comprising a multiplier directly connected to the input and an adder connected to the multiplier, and a plurality of delay elements positioned between the summation units (see generally column 2, lines 12-29; figure 1).

Regarding claims 2 and 9 Cavallotti further illustrates that each of the delay elements is connected to an adder of the next summation unit (see generally figure 1). It is assumed that claim 2 is referring to a successive summation unit as explained in claim 1.

Regarding claim 3 and 10 Cavallotti further discloses an initial delay element and an initial multiplier that supplies the first summation unit with a delayed sample (see generally figure 1).

Regarding claim 4 and 11, Cavallotti further illustrates that the multipliers receive undelayed samples (see generally figure 1).

Regarding claims 7 and 14, Cavallotti further illustrates that each adder receives at most two samples since the delay elements are between the adders (see generally figure 1).

6. Claims 1, 5, 6, 8, 12, 13, 15, 18, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Claydon et al ("Claydon").

Regarding claims 1, 8, and 15, Claydon illustrates an interleaved non-recursive filter comprising an input for receiving samples, a plurality of multipliers directly connected to the

input, a plurality of adders, and a plurality of delay elements (see generally figure 43; column 25, lines 50-67).

Regarding claims 5, 12, and 18, Claydon further discloses two multipliers supplying a multiplied sample to a single adder (see generally figure 43).

Regarding claims 6, 13, and 19, Claydon further discloses that the filter is an interleaved filter receiving odd and even samples whereby an adder receives an even sample from one multiplier and an odd sample from another multiplier (see generally figure 43).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cavallotti in view of Behrens et al ("Behrens").

Regarding claim 15, Cavallotti discloses a non-recursive filter comprising at least one input for receiving samples, a plurality of multipliers directly connected to the input, a plurality of adders connected to the multipliers, and a plurality of delay elements position between the summation units (see generally column 2, lines 12-29; figure 1). However, the filter illustrated by Cavallotti does not process even and odd samples separately. Behrens discloses an interleaved non-recursive filter whereby even and odd samples are processed separately (see generally column 12, lines 29-40; figure 13). It would have been obvious to one of ordinary skill

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in the art at the time of the invention to modify the filter as illustrated by Cavallotti, to interleave even and odd samples, as illustrated by Behrens, in order to process signals requiring samples to be separated.

Regarding claim 16, Cavallotti further discloses an initial delay element and an initial multiplier that supplies the first summation unit with a delayed sample (see generally figure 1).

Regarding claim 17, Cavallotti further illustrates that the multipliers receive undelayed samples (see generally figure 1).

Regarding claim 20, Cavallotti further illustrates that each adder receives at most two samples since the delay elements are between the adders (see generally figure 1).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Demetria A. Williams whose telephone number is (703) 305-4078. The examiner can normally be reached on Monday - Friday, 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (703) 305-4378. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800.


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daw

November 15, 2002


CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600
11/18/02